## Introductory remarks

In spite of increasing resistance to current antibacterial agents, large pharmaceutical companies have been exhibiting greater reluctance to remain in the business of drug discovery for new agents to treat these resistant pathogens. After a flurry of research and development activity in the 1990s to produce drugs to treat multidrug-resistant Gram-positive bacteria, a number of large companies have either terminated or greatly curtailed their antibacterial research efforts. This has resulted in an outcry from infectious disease opinion leaders and regulatory agencies. Some of the companies that reduced or eliminated their own research in anti-infectives due to commercial considerations then relied on biotech companies to become their surrogate research organisations. At the same time, other companies have continued their efforts to identify new antibacterial agents to meet emerging medical needs caused by unrelentingly evolving resistance, especially in Gram-negative pathogens. It is imperative that these companies be encouraged to continue their efforts to avoid an impending crisis in the treatment of infectious diseases. In addition, companies previously active in the field should be encouraged to return.

At the 2003 Interscience Conference on Antimicrobial Agents and Chemotherapy (ICAAC) a symposium entitled *Why is Big Pharma Getting Out of Anti-Infective Drug Discovery?* featured a set of presentations addressing these issues. In this supplement different aspects of antibiotic research and the need for new agents are discussed, based on many of the topics presented at the ICAAC symposium. An academic viewpoint regarding the status of antibiotic resistance is provided. Representatives from large companies, as well as biotechs, have presented some of the common thinking surrounding decisions to stay in, or to retreat from, antibacterial research. In addition, the state of play is presented through the viewpoint of a representative from the FDA. Throughout all these articles is the recurring theme of resistance, and the continuing selection of multidrug-resistant pathogens.

Although the articles in this supplement cover various aspects of research, development and regulatory issues, there is no easy response to the basic commercial issues of treatment of acute disease rather than chronic illness. The fact that antibacterial agents are frequently used to treat life-threatening infections is often forgotten, when the return on investment may not be as attractive as for agents to treat lifestyle modifications, or mild chronic disease. However, it is imperative that those who understand the long-term implications continue to provide possible solutions to the pharmaceutical companies, either to continue their efforts if they are still in the area, or to entice them back into the field if they have recently exited. The recent initiatives proposed by the Infectious Diseases Society of America provide a positive set of proposals for the encouragement of antibacterial research and development at the basic level, and serve to set an example for the kind of forward thinking that must be undertaken. It is especially critical that the infectious disease community work together to educate those outside the anti-infective field as to the importance of continuing the basic research and development of new agents to treat multidrug-resistant infections. Perhaps this supplement will provide additional insight into the questions that have been raised over the past year, resulting in a reconsideration of decisions made by companies that still have research teams intact. The need for new agents will not disappear. We must hope that there will be new drugs emerging from the pipeline to treat them.

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